

# **Cloud Streaming Services**

## **Live Video Caster**

### **Product Documentation**



## Copyright Notice

©2013-2025 Tencent Cloud. All rights reserved.

Copyright in this document is exclusively owned by Tencent Cloud. You must not reproduce, modify, copy or distribute in any way, in whole or in part, the contents of this document without Tencent Cloud's the prior written consent.

## Trademark Notice



All trademarks associated with Tencent Cloud and its services are owned by the Tencent corporate group, including its parent, subsidiaries and affiliated companies, as the case may be. Trademarks of third parties referred to in this document are owned by their respective proprietors.

## Service Statement

This document is intended to provide users with general information about Tencent Cloud's products and services only and does not form part of Tencent Cloud's terms and conditions. Tencent Cloud's products or services are subject to change. Specific products and services and the standards applicable to them are exclusively provided for in Tencent Cloud's applicable terms and conditions.

# Contents

## Live Video Caster

- Overview

- Application Scenarios

- Feature Area Introduction

- Managing Live Video Caster

- General Cloud Director

  - Step One: Incorporate Input Sources

  - Step Two: Directing and Editing

  - Step Three: Generate Output

- Configuring Program Lists and Automated Broadcasting

# Live Video Caster

## Overview

Last updated : 2025-04-25 10:16:37

The Cloud Streaming Services console offers the Live Video Caster (LVC) service. This guide describes the features and main application scenarios of LVC.

## Product Architecture

## Live Video Caster Features

Category	Feature	Description
Input sources, up to 24 inputs supported	Live stream	<b>Live stream pull:</b> Pull from live stream URLs: You can add the URL of an ongoing live stream in the LVC console to pull streams from the URL. Supported protocols are RTMP, HLS, and HTTP-FLV. As for encoding formats, only H.264 encoding is supported for video, and AAC is supported for the audio.
		<b>Live push:</b> RTMP push: It refers to pushing media files to the LVC system using the RTMP protocol. As for encoding formats, only H.264 encoding is supported for video, and AAC is supported for the audio.
	VOD	<b>VOD URL:</b> It supports not only media files stored in Tencent Cloud COS but also files stored by other providers. It supports the MP4, HLS and FLV formats (the FLV format is recommended). The console will automatically play the files in the list in a loop. As for encoding formats, only H.264 encoding is supported for video, and AAC is supported for the audio.



	Image	<p><b>Image URL:</b> The JPEG, JPG, PNG, and BMP image formats are supported. The URL is configured to LVC, with the image size not exceeding 1920*1080 pixels.</p> <p><b>Local Images:</b> The PNG, JPG, and JPEG images can be uploaded, with the size not exceeding 5 MB.</p>
	Local stream push	<p><b>Local Camera:</b> The local camera can be used as an input source, supporting resolutions of 1920 x 1080, 1280 x 720, 640 x 480, and 640 x 360.</p>
		<p><b>Screen Sharing:</b> The input can be a shared screen (an application window or desktop). Supported resolutions include 1920 x 1080, 1280 x 720, 640 x 480, and 640 x 360.</p>
	Dynamic Overlays	The system supports overlaying dynamic overlays onto live streams, enabling effects such as adding advertisements, scoreboards, and character introductions to the live stream visuals.
Output	Output as a live stream	The RTMP, HLS, and HTTP-FLV output stream protocols are supported.
	Relay	<p>Output streams can be pushed to other vendors using the RTMP protocol. The push address must be in the following format:</p> <pre>rtmp://domain/app/stream?arg1=xxx.</pre>
	Recording	All live recording capabilities are supported (MP4, HLS and FLV format recording, custom recording durations, and so on).
Audio/video processing	Video layout	You can customize a video layout by combining any inputs.
	Feature components	Watermark names can be added, and watermark positions can be accurately adjusted. Watermarks and text can be overlaid.
	Standby content	LVC can automatically switch to a standby video or image you specify when the main input source is not available.
	Audio processing	The volume for each input stream in the output flow can be adjusted. Separation of audio and video is supported. For example, when video source 1 is being played, you can choose to play the audio of video source 2.
Director processing	Pre-monitor, main monitor	The layout of pre-monitor images and switching from pre-monitoring to main monitor are supported.
	Delayed playback	Playback with delay of up to 300 seconds is supported. That is, the output stream can lag behind the main monitor by up to 300 seconds.

## Documentation

LVC is mainly used in scenarios such as gaming and e-sports, e-commerce live streams, online education, live events, and so on. For more details, see the [application scenarios](#).

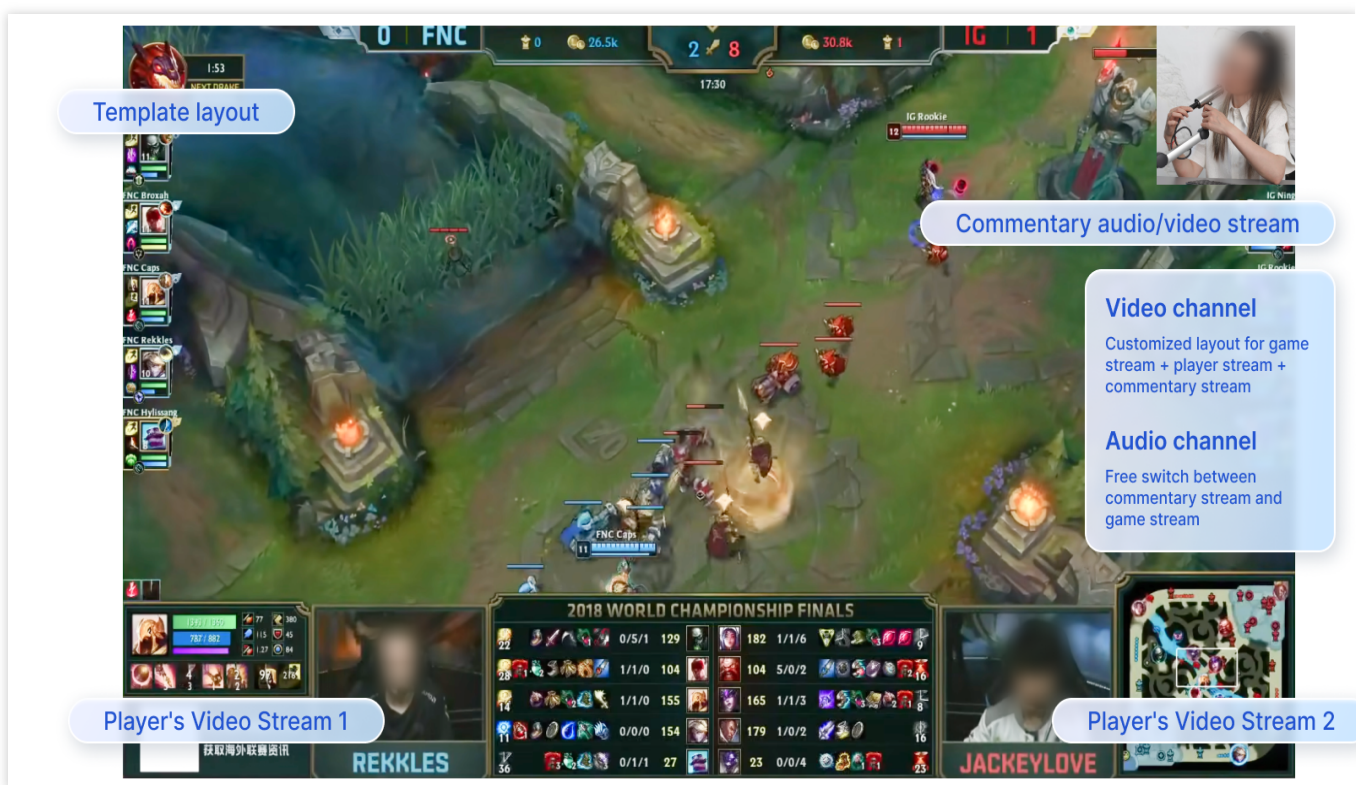
LVC has powerful and cost-effective cloud capabilities, including backup mechanisms, stream mixing, and more. For more details, see [Product Features](#).

# Application Scenarios

Last updated : 2024-07-29 16:12:43

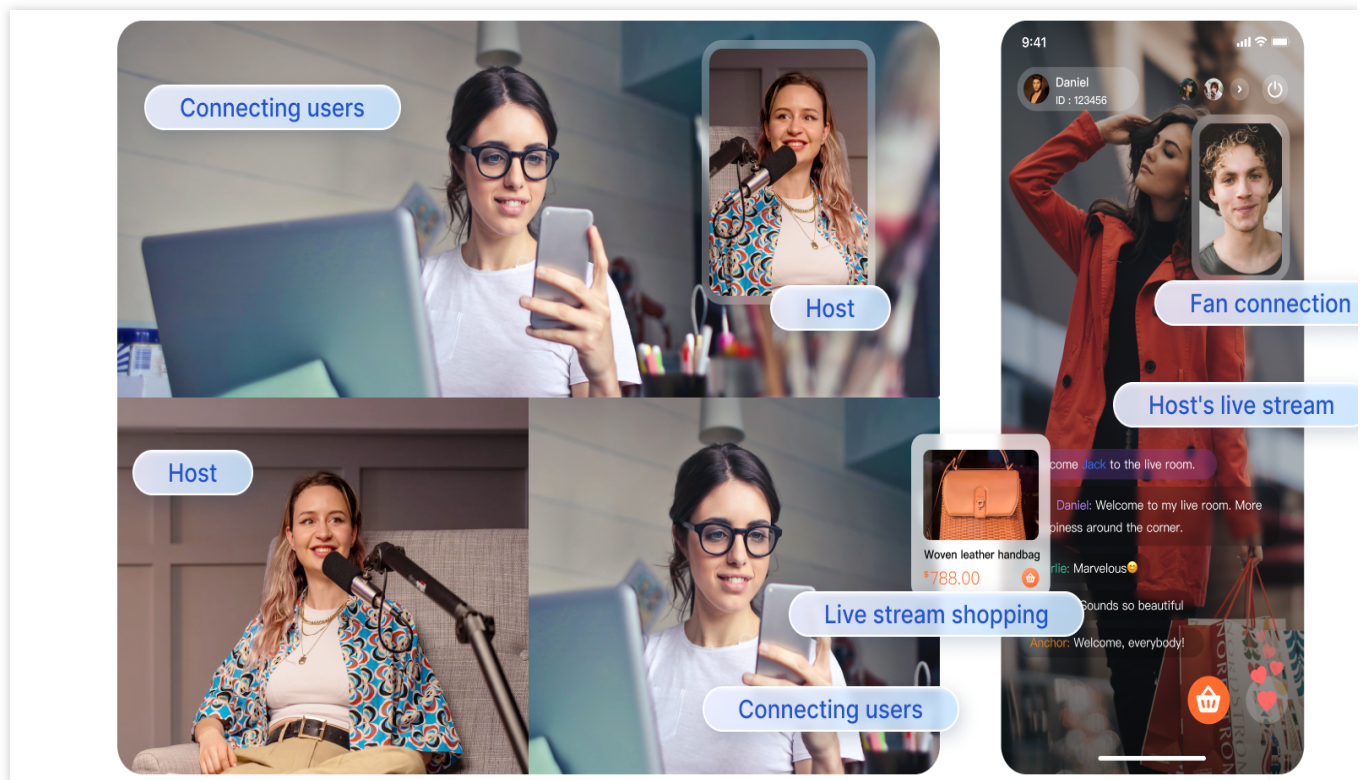
## Gaming and Esports

LVC supports custom layout templates for the main game scene, the commentary scene, and player videos. It also supports separate processing of audio and videos, commentary audio paired with game videos, and real-time audio stream switch.



## Live Shopping

LVC supports outputting a multi-screen stream consisting of the host's and viewers' videos and a product showcase video.



## Online Education

LVC can mix a presentation video, the teacher's video, and a QR code image into one stream.

### Primary functions of Cloud streaming

- Input of multiple formats**  
Supports the input of various formats like video-on-demand, live streaming, and images
- Pre-monitoring and main monitoring**  
Supports pushing video input sources and well-arranged streams to PVW and PGM for monitoring
- Multiple kinds of layout configurations**  
Supports various picture-in-picture layouts and multiple stream inputs for picture-in-picture
- Playback delay feature**  
Supports delayed playback feature with a maximum delay of up to 5 minutes
- Recording and repushing**  
Supports recording function and repushing to multiple outputs, Enriching the downstream broadcast system
- Watermarks and subtitles**  
Supports the addition of multiple watermarks and the subtitle feature
- Mixer**  
Detailed volume adjustment capabilities for each input and output streams
- Transition feature**  
Supports various transition features to increase the transition effects, thus enhancing the vibrancy of broadcasts

**PPT video stream**

**Teacher's video stream**

**QR Code promotional advertisements**

## Live Event Streaming

The console supports real-time editing of watermarks such as QR codes and subtitle texts, which can be pushed to the live streaming. To safeguard the live streaming, a standby video function and automatic switch in the event of a live streaming interruption are supported.





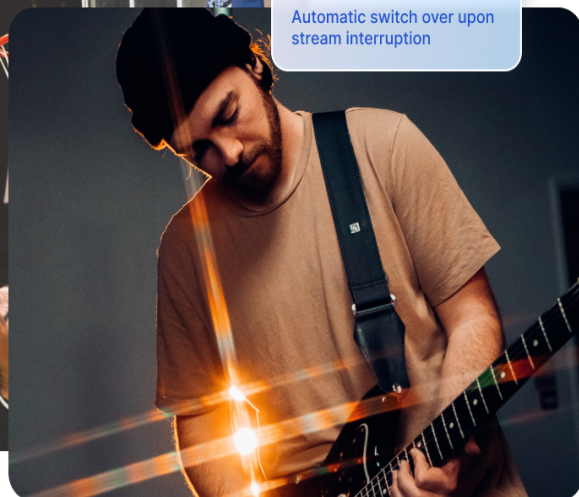
QR Code

### Subtitles

Edit subtitle text in real-time through cloud-based live streaming and subsequently push it to live broadcast

### Standby videos

Automatic switch over upon stream interruption



# Feature Area Introduction

Last updated : 2024-07-29 16:16:27

This document introduces the main components of the Live Video Caster (LVC) console.

**Input Source:** Allows you to customize input sources, including on-demand, live streaming, and image sources.

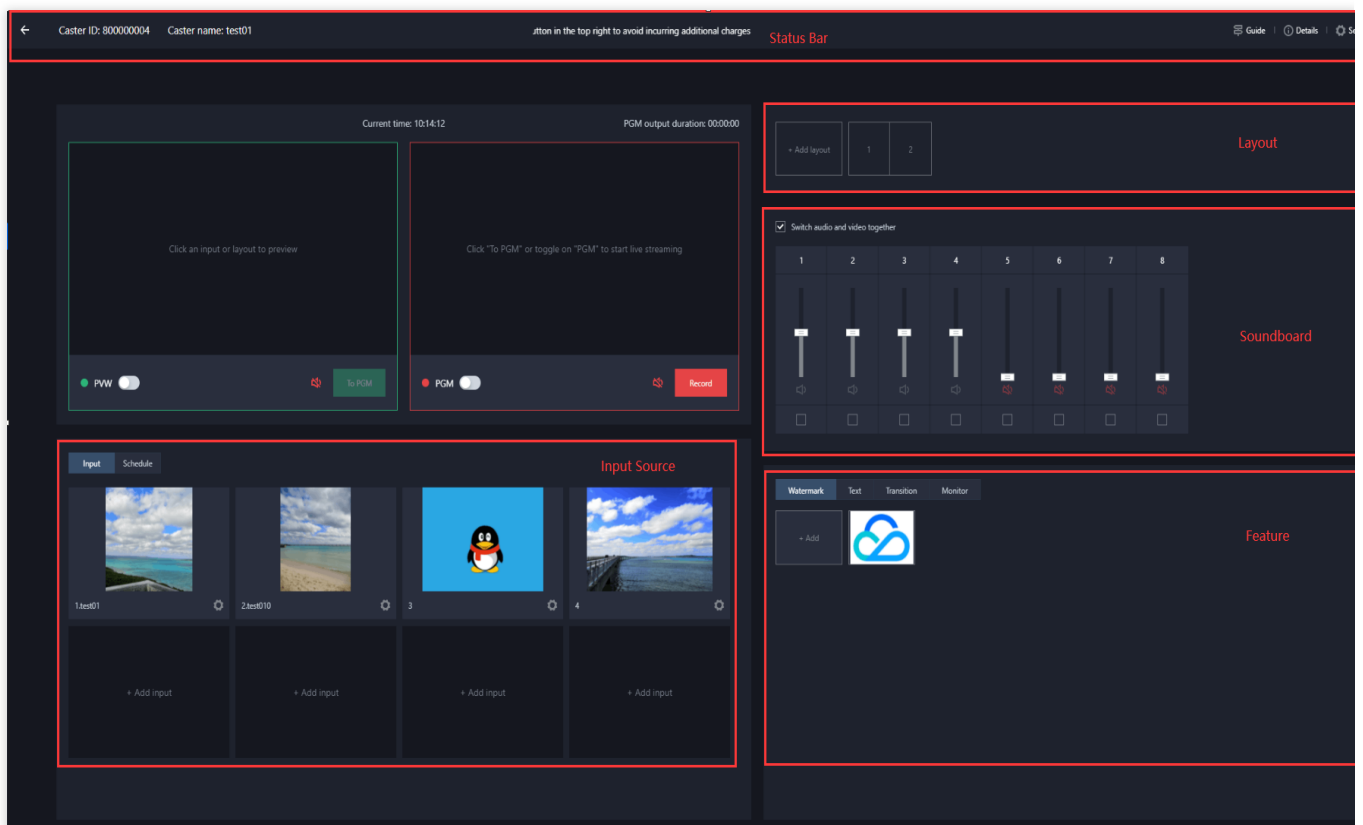
**PVW:** Allows you to preview your broadcast.

**PGM:** Allows you to monitor what the audience see in your broadcast.

**Layout:** Allows you to customize the layout to be used for a mixed stream of multiple input sources.

**Soundboard:** Allows you to adjust the volume of each input stream in the output stream and separate audio from video.

**Feature:** Allows you to set watermarks, text, transitions, and stream monitoring.



# Managing Live Video Caster

Last updated : 2025-05-07 15:50:24

The Cloud Streaming Services (CSS) console provides the Live Video Caster (LVC) service. This document describes how to configure and use the LVC and how to manage cloud streaming after activating the LVC service.

## Prerequisites

You have activated the LVC service.

You have logged in to the [CSS](#).

## Creating a Caster

1. Log in to the CSS console, select [Live Video Caster](#) from the left-hand navigation pane.
2. Click **Add caster**.

3. On the **Add caster** page, set the following parameters:

- 3.1 Caster name: Enter a custom name for the caster.
- 3.2 Caster description: Enter a description for the caster.
- 3.3 Set end time: Enabled by default.
- 3.4 End time: Select a time at which the caster will automatically stop.

### Note:

The caster will stop at the set end time, and the preview, output, recording, and relay functions will all stop at that time. If the end time setting is disabled, the caster will not automatically stop, which will incur unnecessary charges. In this case, you need to manually turn off the live streaming (PGM) to stop the billing. Closing the console page will not stop the billing.

4. Click **Confirm** to complete the creation of the caster.
5. If the end time is set, a dialog box pops up asking for your confirmation. Click **Confirm**.

## Opening a Caster

To open the [Live Video Caster Console](#), click **Open** in the operation column of a caster.

## Setting a Caster



1. You can view casters you created in the [Live Video Caster list](#).
2. To modify a caster, click **Set** in the operation column of the caster to enter the caster settings page.
3. After modifying the caster, click **Confirm** to save the modification.

## Copying a Caster

The copy function allows you to quickly duplicate existing caster instances.

1. Go to the [Live Video Caster Console](#), and choose **More > Copy** in the caster operation column.
2. The default name of the copied caster is `Copy of xx`. You can customize the name of the caster. Click **Confirm** to complete the copy.

## Stopping a Caster

When you are finished using a caster, stop running it in a timely manner. When a caster is stopped, the preview, output, recording, and relay tasks will all stop, but all the LVC settings, including the input, layout, output, and relay settings, will be retained.

1. Go to the [Live Video Caster Console](#) and click **Stop** in the caster status column.
2. A dialog box pops up asking whether to stop running the caster. Click **Confirm** to stop the caster.

### Note:

When a caster is stopped, its status changes from

to

and the billing stops.

## Deleting a Caster

If you no longer wish to maintain a caster, you can delete it. Once a caster is deleted, all its configurations will be deleted, and its preview, output, recording, and relay tasks will stop.

1. In the operation column of the caster you want to delete, choose **More > Delete**.
2. In the dialog box that pops up, click **Confirm** to delete the caster. The deleted caster is no longer included in the instance management page.



# General Cloud Director

## Step One: Incorporate Input Sources

Last updated : 2025-05-07 15:50:24

The Cloud Streaming Services console provides the Live Video Caster (LVC) system. This document describes how to use LVC for online broadcasting after activating the LVC feature.

### Note:

Billable items of LVC include broadcast output duration and third-party relay. Billing is based on usage duration. For more information, see [Live Video Caster Pricing Overview](#).

To avoid incurring unnecessary charges when you are not using a caster, click **Stop** for the caster on the [Live Video Caster list page](#). For detailed procedures, see [Managing Live Video Caster](#).

LVC is incompatible with Internet Explorer and Firefox browsers. We recommend using Chrome.

## Use Limits

Each account can create up to **five** LVC instances. If there are already five instances under your account, you must delete an existing instance before you can add a new one. To add more instances, please [submit a ticket](#).

You can add up to **five** VOD files to the VOD input playback list.

Third-party relay supports up to three streams, one of which is relayed to the current CSS account by default, and the other two can be relayed to third-party vendors. For more information, see [Relay](#).

## Preparations

1. Make sure you have already activated [CSS](#).
2. Make sure you have added a **Push** domain and a **Playback** domain in [Domain Management](#) and completed the CNAME configuration for both domains.
3. Go to the [Live Video Caster](#) page in the CSS console to enter the LVC activation page. Check the box agreeing to the [Tencent Cloud Terms of Service](#) and [LVC Billing Overview](#). Click **Activate** to activate LVC.
4. Make sure you have [created a Live Video Caster](#) in the **Live Video Caster** page.

## Operation Steps

1. Log in to [Live Video Caster](#) and view the Live Video Caster list.
2. Find the caster you want to edit and click its **ID** or click **Open** on the right to enter the caster editing page.

3. In the input source area, click **Add input** to add a video input.
4. In the window that pops up, set the input type and enter the URL of the source video. The following four input types are available:
- Live
  - On demand （Support editing）
  - Image
  - Publish local stream
  - Dynamic Overlays

Add input

Edit input

Input type	Description
Live	<p>Input name: Custom</p> <p>Input type: <b>Live</b></p> <p><b>Pull from URL:</b> The live stream is pulled from a URL to LVC. The RTMP, HLS, SRT, and HTTP-FLV protocols are supported.</p> <p><b>Publish:</b> Media files are pushed to LVC using the RTMP protocol.</p>
On demand	<p>Input name: Custom</p> <p>Input type: <b>On demand URL</b>. Click <b>Add URL</b>.</p> <p>Supports media files stored in Tencent Cloud COS and media files stored by other providers.</p> <p>Supports the MP4, HLS, and FLV formats.</p> <p>You can enter multiple on-demand file URLs separated with semicolons (;). The console automatically cycles through the files in the list.</p>

Image	<p>Input name: Custom</p> <p>Input type: <b>Image</b></p> <p><b>Image URL:</b> Supports JPEG, JPG, PNG, and BMP images not larger than 1920x1080 pixels.</p> <p><b>Local image:</b> Supports uploading PNG, JPG, and JPEG images not larger than 5MB.</p>
Publish local stream	<p>Input name: Custom</p> <p>Input type: <b>Publish local stream</b></p> <p><b>Screen Sharing:</b> The input can be a shared screen (an application window or desktop). Supported resolutions include 1920x1080, 1280x720, 640x480, and 640x360.</p> <p><b>Publish from camera:</b> Supports using the local camera as an input source, supporting resolutions of 1920x1080, 1280x720, 640x480, and 640x360.</p> <p>In the local camera streaming scenario, the beauty effect feature is turned off by default. According to your business needs, you can choose to manually turn this feature on or off.</p> <p>Parameter adjustment: You can customize the beauty effect parameters to improve your personal appearance.</p> <p>Various personalized settings are provided to meet your special needs, including:</p> <p>Beauty Effects and Makeup: These can help to clear skin blemishes, enhance skin texture, and add various makeup effects.</p> <p>Filters and Stickers: You can add various fun filters and stickers.</p> <p>Background and Emoji: You can change the video background or add emojis.</p> <p>Virtual Avatars: You can transform your appearance into various virtual avatars.</p>
Dynamic Overlays	<p>Input name: Custom</p> <p>Input type: Dynamic Overlays</p> <p>Based on your business needs, you can overlay Dynamic Overlays on the live stream from the broadcasting side. You can go to <a href="#">Dynamic Overlays</a> to create them to add a scoreboard, a caption or other effects.</p>

**Note:**

Ensure that each on-demand/live URL you input is accessible. Otherwise, the input will not be playable.

If the input source is interrupted, the output will display a black screen.

5. Click **Confirm** to finish adding the input source. The system will automatically play the video.

**Note:**

To **modify an input source**, click

at the bottom of the input source to enter the input source editing page, fill in the information you need to modify, and click **Confirm** to save the modification.

After modification, click

in the lower-left corner of the video source to refresh. After refreshing, you can see the modified input source displayed.

To **delete an input source**, click

on the top of the input source. A dialog box pops up asking for confirmation. Click **Confirm** to delete the input source.

When you modify or delete an input source, the input source cannot be used in a preview (PVW) or main monitor (PGM) layout.

# Step Two: Directing and Editing

Last updated : 2025-05-07 16:43:12

LVC lets you direct and edit video layouts, audio, watermarks, and standby videos and images, as well as create program schedules. These features can enrich your live stream content.

## Step 1: Setting a Directed Video Frame Size

After you finish [adding video input sources](#) for your caster in Live Video Caster, you can set the frame size for each video output.

The size settings will affect the output size of input sources, template layouts, and custom layouts.

LVC comes with built-in landscape and portrait mode output size templates for live streaming on Weixin Channels. It also supports custom output sizes.

1. In the [Live Video Caster](#) list, find the caster you want to edit and click its **ID** or click **Open** on the right to enter the caster editing page.

2. On the caster editing page, click

in the upper-right corner.

3. Click **Publish** to enter the settings page.

4. Configure the following items in the **Output video** section:

Configuration Item	Description
Video width	Value range: The long side and short side of the video must not exceed 4096 x 2160 pixels. If you need to customize the width and height, both are required.
Video height	Value range: The long side and short side of the video must not exceed 4096 x 2160 pixels. If you need to customize the width and height, both are required.
Frame rate	Value range: Less than or equal to 60fps.
Video bitrate	Value range: Less than or equal to 10,000kbps.
Audio bitrate	Options: 128kbps, 192kbps, and 256kbps.

**Note:**

If only one stream is published and the parameters above are not specified or are 0, the parameters of the original stream will be used. If more than one stream is published and the parameters above are not specified or are 0, the output resolution will be 720p.

## Step 2: Configuring a Layout

1. Click **Add layout** in the layout component of the function area to enter the layout creation page.

2. Select a layout style and create the corresponding layout:

Select a [template layout](#).

Select a [custom layout](#).

3. The layout you created is displayed in the layout component area.

4. Click the successfully added layout to push it to the preview (PVW) window.

**Note:**

LVC comes with five layout templates. Select an appropriate template based on your needs or customize a layout.

The layout that is currently in use in PVW is marked by a green frame. The layout currently in use in PGM is marked by a red frame. Layouts in use cannot be edited or deleted.

To edit a layout template, click

in the lower-right corner of the layout.

To delete a layout template, click

in the upper-right corner of the layout.

### Layout Guide

LVC supports multiple layout modes in different output sizes.

Landscape mode:

**Portrait mode:** To use the portrait layout for output, click **Set** in the upper-right corner of the main page to enter the page for changing the [output size](#).

### Template Layout



LVC comes with five built-in templates. You may select a template based on your needs, as detailed below:

1. Click to select the layout template you want to use.
2. Click the **Select an input** drop-down list to select input sources.
3. After selecting input sources, you can preview your video in the preview box.
4. Click **Confirm** to complete the creation of the layout.

## Custom Layout

LVC allows you to customize the arrangement, stacking order, and sizes of input sources and drag and drop them as needed.

1. Click **Custom layout** and click **Add** to add input sources.

### Note:

You can add a maximum of four input sources; to remove an input source, click

2. Adjust the layout of the input sources:

Click and hold the mouse button while dragging to adjust the sizes and positions of input sources.

Click **Front** or **Back** to adjust the stacking order of the input sources.

3. Click the **Select an input** drop-down list to select input sources. After selecting input sources, you can verify the video effect in the preview window.

4. Click **Confirm** to complete the creation of the layout.

## Step 3: Starting Preview

View the video input source area and click an added input source or a created layout template to start preview (PVW).

### Note:

The layout currently in use in PVW is marked by a green frame. An input source or layout in use cannot be deleted directly. To delete a layout in use, manually close PVW or PGM or stop the caster first.

## Step 4: Setting Audio

LVC allows you to adjust the volume of each input stream in the output stream. When the **Switch audio and video together** box is checked, the audio and video in the PVW playback are from the same input source. For example: If PVW is playing the video from input source 1, the audio being played is also from input source 1. If PVW is playing a mixed stream of video from input sources 1 and 3, the audio being played is also a mix of audio from input sources 1 and 3.

When the **Switch audio and video together** box is unchecked, audio and video can be selected separately. For example:

If the video from input source 1 is being played, you can choose to play the audio from input source 3. If a mixed stream of video from input sources 1 and 3 is being played, you can choose to play the audio from input source 1 only.

## Step 5: Adding a Component

### Watermarking

#### Creating a Watermark Template

LVC supports multiple watermark overlays. To add a watermark in your directed footage, follow these steps:

1. Select the Watermark tag and click **Add** to enter the watermark creation page.

2. Click **Upload** to upload your watermark image.

#### Note:

The watermark image can be in PNG, JPG, JPEG or GIF format, with a maximum size of 2M and a width and height not exceeding 1024px. Dynamic watermarks are supported.

After the upload, you can position the watermark by dragging it or specifying its coordinates for a higher positioning precision.

3. Adjust the position and size of the watermark image by dragging the image on the editing screen or clicking

to **enter coordinates manually** and entering the precise pixel values.

4. Customize a name for the watermark.

#### Note:

To enter coordinates manually, you must start preview (PVW) first.

5. After the adjustment, you can click **Preview** to view the watermark effect.

6. When you are finished, click **Confirm** to save the watermark template.
7. Select the watermark template you want to enable, and click

to turn on the **PVW window**.

8. The watermark is displayed in the PVW window.

### Editing a Watermark Template

1. Select a watermark template you created and click **Edit** on the right to modify the template data.
2. Adjust the watermark template based on your business requirements. After the adjustment, click **Confirm**.

### Deleting a Watermark Template

#### Note:

If a watermark template is in use, it cannot be deleted.

1. Select a watermark template you created and click **Delete** on the right.
2. Click **Confirm** to delete the template.

## Adding Text

### Creating a Text Template

LVC supports multiple text overlays, as well as text and watermark overlays. To add text in your directed footage, follow these steps:

1. Select the Text tab and click **Add** to enter the text creation page.
2. Configure the following items based on your business requirements:

Text

Time

Configuration Item	Description
Type	The default is <b>Text</b> , and you can also select <b>Time</b> . Text:

	Enter the text to be displayed. Time: Set the type to either Time or Date + Time.
Font	Options: Songti and Heiti.
Size	Value range: 16 to 60.
Font color	Customize the font color according to your preference.
Position	Drag and drop the text to adjust its position.
Display	Options: <b>Fixed position</b> , <b>Scroll</b> and <b>Single Scroll</b> .

3. After the editing, click **Confirm** to save the text template.

4. Select the text template you want to enable, and click

to turn on the **PVW window**.

5. After the PVW window is turned on, The text is displayed in the PVW window.

## Editing a Text Template

1. Select a text template you created and click **Edit** on the right to modify the template data.

2. Adjust the text template based on your business requirements. After the adjustment, click **Confirm**.

## Deleting a Text Template

### Note:

If a text template is in use, it cannot be deleted.

1. Select a text template you created and click **Delete** on the right.

2. Confirm whether to delete the text template. Click **Confirm** to delete it.

## Adding Subtitles

### Adding a Subtitle Template

1. Select the subtitle tag, and then click **Add** to enter the subtitle adding page.

2. Based on your business requirements, proceed with the following configurations:

Configuration Item	Description
Subtitle Remarks	You can customize the subtitle remarks according to your needs.
Title Content	You can customize the title content according to your needs, which contains up to 20 characters. The title bar is displayed by default. You can manually uncheck it to hide the title bar.
Title Font	The default title font is <b>Songti</b> . You can also select <b>Heiti</b> .
Title Font Size	The font size range is from 12 to 60. You can select a font color according to your preference.
Title Background	The default style is <b>Modern Minimalist</b> . You can also select the <b>Youthful and Lively</b> style. You can select a title background color according to your preference.
Subtitle Content	You can customize the subtitle content according to your needs, which contains up to 512 characters. After the subtitle content is entered, the preview page will show the effect.
Subtitle Font	The default subtitle font is <b>Songti</b> . You can also select <b>Heiti</b> .
Subtitle Font Size	The font size range is from 12 to 60. You can select a font color according to your preference.
Subtitle Background	The default style is <b>Modern Minimalist</b> . You can also select the <b>Youthful and Lively</b> style. You can select a subtitle background color according to your preference.
Display	The default is <b>Fixed position</b> . You can also select <b>Scroll</b> or <b>Single Scroll</b> . The <b>Scroll</b> and <b>Single Scroll</b> modes both support setting the scrolling speed. The default speed is 5 seconds/line, namely the time for a character to scroll from right to left. The adjustable speed range is 5-600 seconds/line.
Position	On the preview page, you can drag and drop the text to adjust its position.

3. After editing is completed, click **Confirm** to save the subtitle template.

4. Select the subtitle template you want to enable, and click

to turn on the **PVW window** .

5. After the PVW window is turned on, subtitles will be displayed in the left PVW.

### Modifying a Subtitle Template

1. Select the subtitle template you created, and click **Edit** on the right to modify the template information.
2. Adjust the subtitle template according to your actual business needs. After the adjustment is completed, click **Confirm**.

### Deleting a Subtitle Template

#### Note:

If a subtitle template is in use, it cannot be deleted.

1. Select the subtitle template you created and click **Delete** on the right.
2. To confirm the deletion of the current subtitle template, click **Confirm** to delete it.

### Adding a Transition

LVC offers a variety of transition effects. Click any transition template to use it. Once selected, the transition effect will appear the next time video sources are switched.

## Step 6: Adding a Standby Video or Image

### Adding a Standby Video

A standby video serves as an auxiliary input source. LVC automatically switches to the auxiliary input source when your live stream is interrupted unexpectedly.

#### Note:

If the standby video function is enabled, when the input source or pulled stream for the PGM (primary stream) fails or is interrupted, LVC automatically switches to the standby video. Once the primary stream recovers, LVC switches back to the primary stream.

Set this function by following these steps:

1. Click

in the upper-right corner, select **Standby Settings** to enter the configuration page, and click

to enable standby video.

2. Set the input type and fill in the corresponding URL. **On demand URL** and **Live URL** are supported.
3. After the configuration, click **Confirm** to save the settings.

**Note:**

If added successfully, the video can be previewed in this window.

## Adding a Standby Image

A standby image serves as an auxiliary image input source. LVC automatically switches to the auxiliary input source when your live stream is interrupted unexpectedly.

**Note:**

If the standby video function is not enabled, when the input source or pulled stream for the PGM (primary stream) fails or is interrupted, LVC automatically switches to the standby image. Once the primary stream recovers, LVC switches back to the primary stream.

If a standby video and standby image are both enabled, LVC switches to the standby video first. If the standby video also fails, LVS switches to the standby image.

Enable the standby image function by following these steps:

1. Click

in the upper-right corner, select **Standby Settings** to enter the configuration page, and click

to enable standby image.

2. Click **Upload** and select and upload a local image.

**Note:**

The maximum image size is 5MB. The PNG, JPG, and JPEG formats are supported.

3. Click **Confirm** to save the settings.

# Step Three: Generate Output

Last updated : 2025-05-07 15:50:24

After configuring the Live Video Caster (LVC), you can start PGM output. LVC also supports recording and relay, enriching downstream live broadcast systems.

## Prerequisites

You have completed the steps in [Adding Input Sources](#).

You have completed the steps in [Directing and Editing](#).

## Step 1: Starting Output

1. If the preview effect meets your requirements, you can click **To PGM** to start the output.

### Note:

A red frame appears on the input source or layout that is currently being used for output, indicating that the input source or layout is in use in PGM.

Once the stream is published to PGM, formal output and billing start. Closing the LVC console will not stop the live streaming or PGM output; the LVC will remain in operation and billing will continue. To stop the LVC, you need to manually turn off the PGM.

2. Before publishing the stream, the system once again verifies whether to turn on the main monitor (PGM).

3. Once the output starts, you can see the published stream in the main monitor.

## Step 2: Obtaining the Output Playback URL

1. After the stream is published to PGM, if you want to obtain the output playback URL, you can click **Details** in the upper-right corner to enter the details page.

2. Click **Generate** to enter the [Address Generator](#) to generate the URL.

### Note:

Make sure you have already successfully [configured a CNAME](#) for your domain.



If you have not set a live streaming playback domain, this section is blank and you cannot play the stream through Tencent Cloud CDN.

If you have multiple domains, the LVC system will randomly select a domain to generate a playback URL. If the randomly selected domain does not meet your needs, you can go to the CSS console to generate a playback URL.

## Step 3: Recording the Live Stream

1. Click

in the main monitor (PGM) to enter the recording configuration page.

2. Select a recording template you configured and set the recording end time. The maximum recording duration is 24 hours. Click **Confirm** to start recording.

3. When the recording is completed, click

.

4. Click **Confirm** to finish the recording.

5. The system transmits the recorded file to the Video on Demand (VOD) system. You can view the recorded file in **VOD**.

6. Click **Details** in the upper-right corner to enter the details page and view or copy the prefix of your recording file.

### Note:

You can go to [VOD](#) > **Application Management**, select an application, and click **Enter Application** to access the **Media Asset Management Guide**.

On the **Audio/Video Management** page, you can search for a recorded video by entering its file prefix.

## Step 4: Setting a Relay

To push your live stream to a third-party cloud vendor, you need to configure a relay first.

1. Click

in the upper-right corner and select **Publish** to enter the push settings page.

2. Fill in the **CSS stream name**.

3. You can enable delayed playback for the live stream. The maximum delay is 300 seconds.

4. Click **Advanced settings** to configure the domain and parameters.

Advanced Settings	Required	Description
Push domain	No	Select an available push domain. If left blank, this field will be filled with a backend-generated value when you save the settings.
AppName	No	Use English letters, numbers, and underscores only.
Custom parameters	No	Enter stream push parameters.

5. Set a relay address:

5.1 Click

to add a custom third-party vendor address.

#### Note:

Third-party relays can only be RTMP-based. Platform push addresses should be in the format of

```
rtmp://domain/app/stream?arg1=xxx .
```

Third-party relay is only available by using CSS.

A maximum of three target addresses are supported in third-party relay. One of the target addresses defaults to the current Tencent Cloud Streaming Services account, and the other two can be third-party addresses, excluding streaming domain names under the current account. Relay to third parties incurs relay bandwidth-based fees, which are calculated according to the relay charging standard.

Relay to other CSS accounts (other than those under the current account) also incurs bandwidth-based fees, which are calculated according to the relay billing rules. For more information, see [Live Video Caster Billing Overview](#).

6. Set the size of the video output.

Select **Custom**, and set the following parameters:

Video width: The long side and short side of the video must not exceed 4096 x 2160 pixels.

Video height: The long side and short side of the video must not exceed 4096 x 2160 pixels.

Frame rate: No greater than 60 fps.

Video bitrate: No greater than 10,000 kbps.

Audio bitrate: Supports 128 kbps, 192 kbps, and 256 kbps.

7. Click **Confirm** to save the settings.

## Step 5: Setting a Standby Input Source

You can enable a standby input source on the standby stream page.

1. Click

in the upper-right corner and select **Standby Settings** to enter the standby stream page.

2. Enable or disable the standby video. A standby video serves as an auxiliary input source. If a standby video is enabled, when the input source or pulled stream for the PGM (primary stream) fails or is interrupted, LVC automatically switches to the standby video. Once the primary stream recovers, LVC switches back to the primary stream.

3. Set the input type to On demand URL or Live URL.

On demand URL: You can set multiple on-demand URLs by separating them with semicolons (;) or line breaks.

Live URL: Fill in this field with the stream/playback URL.

4. Enable or disable the standby image. A standby image serves as an auxiliary image input source. If a standby video is not enabled, when the input source or pulled stream for the PGM (primary stream) fails or is interrupted, LVC automatically switches to the standby image. Once the primary stream recovers, LVC switches back to the primary stream.

5. Click **Upload** and upload a standby image. The size limit is 5MB, and the image format must be PNG, JPG or JPEG.

6. Click **Confirm** to save the settings.

### Note:

If a standby video and standby image are both enabled, LVC switches to the standby video first. If the standby video also fails, LVS switches to the standby image.

## Enable Emergency Standby

1. After the PGM on the director's console is turned on, you can also manually insert the standby input through the Emergency Standby function. You can click

to manually start the Emergency Standby.

### Note:

First, you need to configure the standby in the settings ([add Standby video/picture](#)) and turn on PGM to enable the Emergency Standby function.

If the Standby video function is not enabled, when the input source (referred to as the primary stream) of PGM is disconnected or fails to pull the stream, it will automatically switch to the Standby image. When the primary stream is recovered, it will switch back to the primary stream.

2. After clicking **Confirm**, the PGM image will be switched to the standby image immediately.

## Turn off Emergency Standby

1. According to your business needs, you can click

to turn off Emergency Standby. Once it is disabled, standby will be switched to PGM. If delayed playback is configured for LVC, delayed playback will be performed before the standby is switched to PGM.

2. Click **Confirm** to switch to live streaming.

## Step 6: Monitoring Output Stream Quality

After the stream is output from LVC, you can view the frame rate and bitrate data in the **Monitor** section.

1. Click **Refresh** in the upper-right corner to refresh the current chart.
2. Click **Stream data** to view the detailed push stream data.

Frame rate

Video bitrate

# Configuring Program Lists and Automated Broadcasting

Last updated : 2025-05-07 15:50:24

Live Video Caster (LVC) allows you to create schedules to configure scheduled broadcasting. This enables input sources or layouts to be published in a planned way.

## Prerequisites

You have completed the steps in [Adding Input Sources](#).

You have completed the steps in [Directing and Editing](#).

## Configuring a Schedule

### Creating a Schedule

1. In the [Live Video Caster](#) list, find the target caster and click its **ID** or click **Open** on the right to enter the caster editing page.
2. Select **Schedule**, click **Create schedule**, and proceed with the following configurations:

Configuration Item	Description
Schedule name	Enter the schedule name, which can consist of up to 10 characters.
Start time	Select the start time of the schedule, which should be later than the time the schedule is saved. If scheduled broadcasting is enabled, at the start time, LVC automatically turns on the main monitor (PGM) to start streaming and billing begins.
End time	Select the end time of the schedule, which must be later than the start time and not exceed the expiration time of the caster. If scheduled broadcasting is enabled, at the end time, LVC automatically stops the PGM to stop streaming, and billing ends.
Switch audio and video together	The Switch audio and video together feature is enabled by default. You can choose to manually disable this feature based on your business needs.

If it is enabled, the audio/video switches accordingly when programs in the schedule are switched. If it is disabled, you need to select an input source as the schedule background audio. The background audio will always play regardless of program switches. You can set the audio volume in the soundboard. Changes to the background audio for an ongoing schedule will take effect at the start of the next program.

3. Click **Next** and configure the following items in the **Add program** area:

Configuration Item	Description
Program name	Enter a program name, which can consist of up to 10 characters.
Stream time	The stream time of the first program must be the same as the schedule's start time. For others, the stream time should be between the schedule's start time and end time.
Program type	You can choose pre-configured sources or layouts.
Watermark	You can choose up to five watermarks.
Text	You can choose up to five texts.

4. Click **Add to schedule** to add the program. You can add multiple programs to a single schedule.

5. After adding programs, click **Save** to complete the creation of the schedule.

#### Note:

The stream time you set for an inserted program should be later than the current time.

## Editing a Schedule

1. In the [Live Video Caster](#) list, find the target caster and click its **ID** or click **Open** on the right to enter the caster editing page.

2. Select a successfully created schedule, and click **Edit** on the right to enter the schedule editing page.

#### Note:

Expired schedules cannot be edited.

If scheduled broadcasting is enabled, the ongoing schedule's start time cannot be changed, though the end time can be changed.

Click **Schedule** to navigate to the ongoing program.

3. Click **Edit** on the right side of Schedule.

3.1 The schedule live broadcast start time and live broadcast end time can be modified.

3.2 The Switch audio and video together feature is enabled by default. You can choose to manually disable this feature based on your business needs.

3.3 Click **Confirm** to save the changes.

4. Select the program you want to edit, and click **Edit** on the right to edit the program.

5. Select the program you want to delete, and click **Delete** on the right to delete the program.

6. Click **Change** to change the program content.

7. After the editing, click **Save** to save the modifications.

## Deleting a Schedule

### Note:

Schedules cannot be recovered once deleted. **Exercise utmost caution when deleting a schedule.**

The system automatically clears each schedule seven days after its end time.

1. On the Schedule tab page, select the target schedule, and click **Delete** on the right.

2. Click **Confirm** to delete the schedule.

## Inserting a Schedule

1. Click

to insert a newly created schedule.

### Note:

The time period you set for an inserted schedule should not be earlier than the current time.

2. Repeat the previous step to insert more schedules, or edit or delete existing schedules.

# Configuring Scheduled Broadcasting

## Enabling Scheduled Broadcasting

1. After configuring schedules, you can enable scheduled broadcasting.
2. Click

to enable scheduled broadcasting. If this function is enabled, LVC will automatically start and stop the PGM output according to the start and end time of the schedules. **The caster will run and incur charges while the PGM output is on.** To stop the current and future billing, ensure that both scheduled broadcasting and PGM are turned off.

3. Click **Enable** to enable scheduled broadcasting.

**Schedule start time** (when live broadcast starts): If scheduled broadcasting is enabled, at the schedule start time, LVC automatically turns on the PGM to start streaming the first program and billing begins.

**Program stream time** (excluding the first program): If scheduled broadcasting and the PGM are both enabled, at the stream time of a program, LVC automatically switches to the program and pushes it to the PGM.

**Note:**

If the PGM or scheduled broadcasting is disabled during a scheduled broadcast, programs will no longer switch automatically.

**Schedule end time** (when live broadcast ends): If scheduled broadcasting is enabled, at the schedule end time, LVC automatically stops the PGM and billing ends.

## Disabling scheduled Broadcasting

**Note:**

After scheduled broadcasting is disabled, LVC will no longer start and end live broadcasts according to the schedules' start and end time. To avoid incurring unnecessary charges, ensure that the main monitor (PGM) is also turned off.

1. To end scheduled broadcasting, click

.

2. Consider your actual business needs before deciding to stop scheduled broadcasting; proceed with caution. Click **Disable** to stop scheduled broadcasting.